

Work Order ID 146924

Tuesday, May 24, 2016 10:01:57 AM

146924

Page 1

Item ID: D3955-23 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Template
 Start Date: 5/20/2016 Start Qty: 4.00 ***4*** Cust Item ID:
 Required Date: 5/24/2016 Req'd Qty: 4.00 ***4*** Customer:
 Reference:

Approvals: Process Plan: MCS Date: MAY 26 2016 Tooling: _____ Date: _____
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____
 Run Start ***NR1***
 Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3955	A								
100		0.00							
100									
Waterjet	Memo	0.00							
FLOW CNC Waterjet	1-Cut as per Dwg D3955 Dwg Rev: <u>A</u> Prog Rev: <u>A</u> 2-Deburr if necessary								
110	QC2- Inspect parts off machine FAI/FAIB	0.00							
110									
QC	Memo	0.00							
Quality Control									

PR 2016/07/11

DAS
14
9-89

16/07/11

PR 2016/07/11

DAS
14
9-89

16/07/11

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER :							

Work Order ID 146924

Tuesday, May 24, 2016 10:01:57 AM

146924

Page 2

Item ID: D3955-23

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Template

Start Date: 5/20/2016 Start Qty: 4.00

4

Cust Item ID:

Required Date: 5/24/2016 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC8- Inspect parts - second check	0.00				<u>4</u>			DAS 38 9-89
120									
QC	Memo	0.00							
Quality Control									JUL 11 2016
130	Identify as per dwg & Stock Location: <u>Stock</u>	0.00				<u>4</u>			DAS 6 9-89
130									
Packaging	Memo	0.00							JUL 12 2016
Packaging									
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	0.00							
Quality Control									16/7/13 <u>AD</u>

DAS
21
9-89
JUL 12 2016

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Picklist Print

Tuesday, May 24, 2016 10:01:57 AM

Page 1

Work Order ID: 146924

146924

Parent Item: D3955-23

D3955-23

Parent Item Name: Template

Start Date: 5/20/2016

Required Date: 5/24/2016

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP RevA: New issue DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6S.040		Purchased			No		sf	176.2000		1.668211			

M6061T6S 040

6061-T6 .040 Sheet

PR206/07/11

Location

Loc Qty

Loc Code

MAT021

176.2

m132037

24.9

m133548

71.3

m134774

80

M135147

1.7

DAS
14
9-29

16/07/11

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐				FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐					
OTHER : _____									

DART AEROSPACE LTD		Work Order: 176924
Description: Template		Part Number: D3955-23
Inspection Dwg: D3955	Rev: A	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

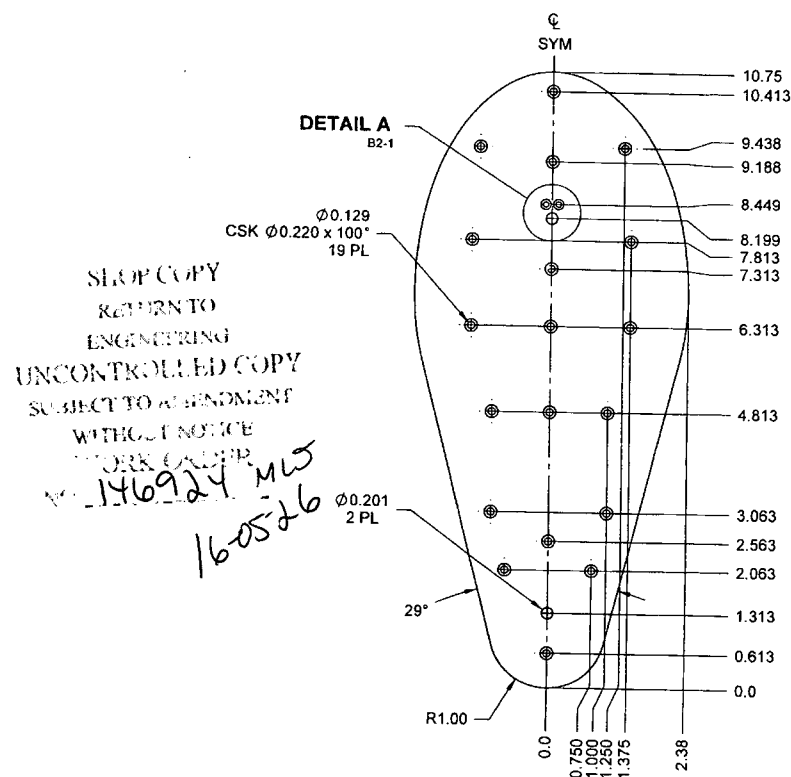
☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.098	+0.004/-0.001	0.101	✓		Decal	
Ø0.129	+0.005/-0.001	0.131	✓		Decal	
0.750	+/-0.010	0.754	✓			
1.000	+/-0.010	1.002	✓			
1.250	+/-0.010	1.252	✓			
1.375	+/-0.010	1.375	✓			
2.563	+/-0.010	2.566	✓			
0.800	+/-0.010	0.801	✓			
1.500	+/-0.010	1.500	✓			
2.250	+/-0.010	2.253	✓			
2.750	+/-0.010	2.750	✓			
3.250	+/-0.010	3.254	✓			
5.000	+/-0.010	5.000	✓			
6.500	+/-0.010	6.501	✓			
7.500	+/-0.010	7.501	✓			
8.000	+/-0.010	8.002	✓			
8.500	+/-0.010	8.500	✓			
9.375	+/-0.010	9.372	✓			
9.625	+/-0.010	9.627	✓			
10.600	+/-0.010	10.600	✓			
11.13	+/-0.030	11.125	✓			
0.040	+/-0.010	0.039	✓			

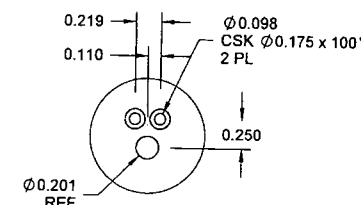
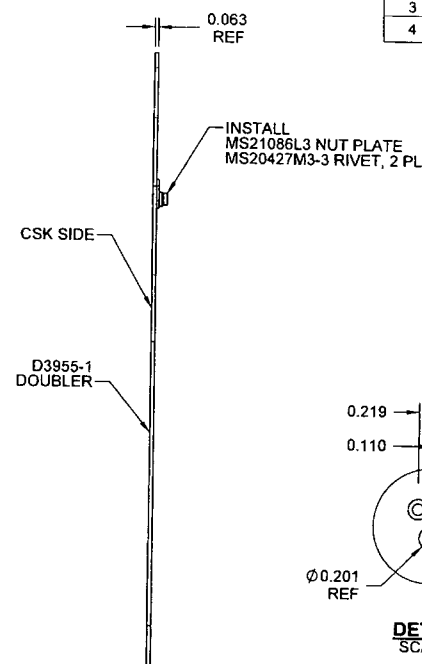
Measured by: PR 14 12/07/11	Audited by: 38 9-89	Prototype Approval: N/A
Date: 2016/07/11	Date: JUL 11 2015	Date: N/A

Rev	Date	Change	Revised by	Approved
A	09.07.29	New Issue	KJ	

ITEM	QTY -041	P/N	DESCRIPTION
1	X	D3955-041	DOUBLER ASSY
2	1	D3955-1	DOUBLER
3	1	MS21086L3	NUT PLATE
4	2	MS20427M3-3	RIVET



D3955-1 DOUBLER



DETAIL A D7-1
SCALE 2X

D3955-041 DOUBLER ASSEMBLY

RELEASED
09/07/22 MWS

D3955-1 NOTES:

- 1) MATERIAL: 6061-T6 ALUMINUM, 0.063 THICK SHEET PER AMS-QQ-A-250/11 OR AMS 4025 OR AMS 4027 (REF. DART SPEC. M6061T6S.063)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART ASSEMBLY P/N "D3955-041" USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 0.25 lbs

A	NEW ISSUE	RF	09.07.21
REV.	DESCRIPTION	BY	DATE
DESIGN	DS		
DRAWN	RF		
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	09.07.21		

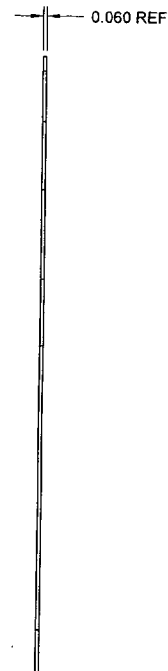
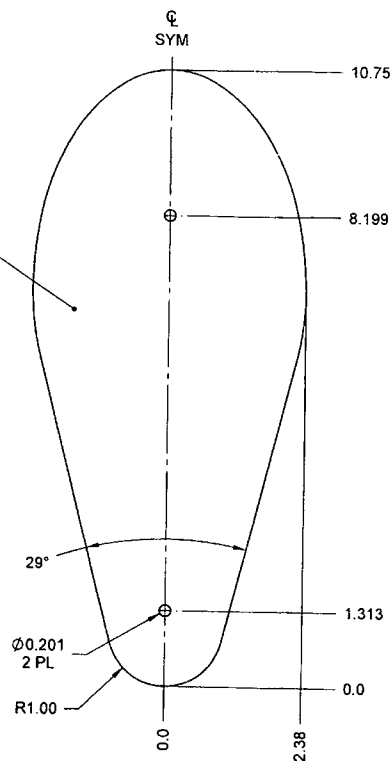
DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. **D3955** REV. A
SHEET 1 OF 5

TITLE **SKIDTUBE TUNING KIT** SCALE NTS

COPYRIGHT © 2009 BY DART AEROSPACE LTD
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS
NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT
WRITTEN PERMISSION FROM DART AEROSPACE LTD

APPLY ANTI-SKID
ON ONE SIDE ONLY



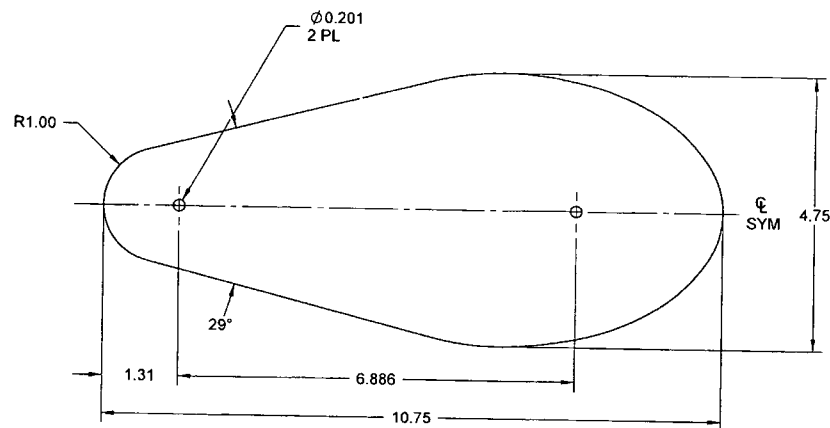
D3955-3 COVER PLATE

RELEASED
09/07/21

NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL SHEET, 0.060 (16 GA) THICK (REF. DART SPEC. M304S16GA)
- 2) FINISH: BLACK ANTI-SKID PAINT PER DART QSI 005 4.4
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3955-3" USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 0.64 lbs

DESIGN	DS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		D3955	SHEET 2 OF 5
APPROVED		TITLE	SCALE
DE APPR.		SKIDTUBE TUNING KIT	NTS
DATE	09.07.21	COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	



D3955-X PLATE

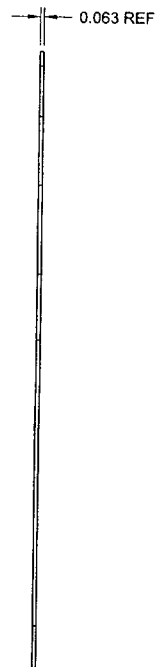
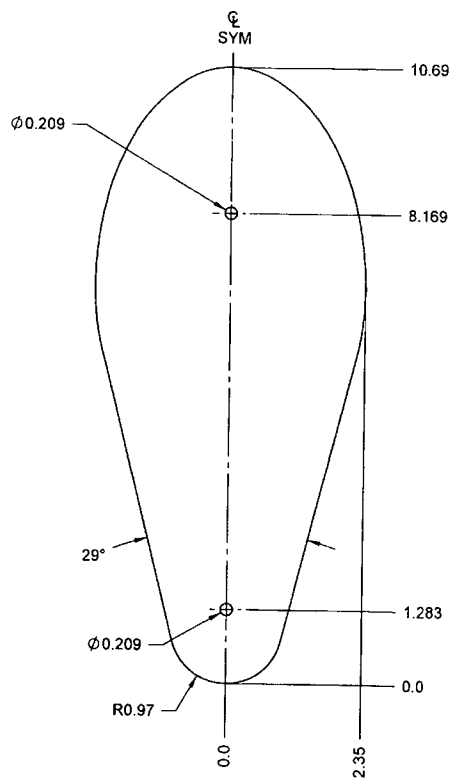
General Table			
P/N	T (in)	T (GA)	WEIGHT (lbs)
D3955-5	0.060	16	0.64
D3955-7	0.120	11	1.28

NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL SHEET, T (GA) THICK (REF. DART SPEC. M304S'T'GA)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3955-X" USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: SEE TABLE

RELEASED
9/6/22 MJD

DESIGN	DS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
DRAWN	RF	
CHECKED		DRAWING NO. D3955
MFG. APPR.		REV. A SHEET 3 OF 5
APPROVED		TITLE SKIDTUBE TUNING KIT
DE APPR.		SCALE NTS
DATE	09.07.21	COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



D3955-21 GASKET

RELEASED
07/07/22 NW

D3955-21 NOTES:

- 1) MATERIAL: BLACK NEOPRENE SHEET, 0.063 THICK, 60 DUROMETER (REF. DART SPEC. M-NEO60-S.063)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3955-21" USING YELLOW PAINT MARKER
- 7) WEIGHT: 0.08 lbs

DESIGN	DS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED		DRAWING NO. D3955	REV. A
MFG. APPR.		TITLE SKIDTUBE TUNING KIT	SHEET 4 OF 5
APPROVED		SCALE	NTS
DE APPR.		COPYRIGHT © 2009 BY DART AEROSPACE LTD	
DATE	09.07.21	THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	



RELEASE
09/27/22 NW

7) WEIGHT: 0.16 lbs

DESIGN	DS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	REV. A
DRAWN	RF		
CHECKED		DRAWING NO.	SHEET 5 OF 5
MFG. APPR.		D3955	
APPROVED		TITLE	SCALE
DE APPR.		SKIDTOE TUNING KIT	NTS
DATE	09.07.21	COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS UNDERSTANDING THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR CONVEYED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	